



1fr 2616

PTO/SB/21 (09-04)

Approved for use through 07/31/2006.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/071,903
Filing Date	February 8, 2002
First Named Inventor	Kim et al.
Art Unit	2616
Examiner Name	Thai D. Hoang
Attorney Docket Number	I-2-0176.2US

### ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	Form PTO-1449 (2 pgs. w/ copies of six (6) references).
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

Remarks

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	VOLPE AND KOENIG, P.C.		
Signature	<i>Thomas A. Mattioli</i>		
Printed name	Thomas A. Mattioli		
Date	June 27, 2007	Reg. No.	56,773

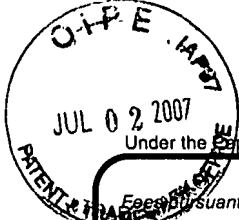
### CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	<i>Thomas A. Mattioli</i>		
Typed or printed name	Thomas A. Mattioli	Date	June 27, 2007

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

# FEE TRANSMITTAL

## For FY 2006

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 180.00

**Complete if Known**

Application Number	10/071,903
Filing Date	February 8, 2002
First Named Inventor	Kim et al.
Examiner Name	Thai D. Hoang
Art Unit	2616
Attorney Docket No.	I-2-0176.2US

**METHOD OF PAYMENT** (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_☒ Deposit Account Deposit Account Number: 09-0435 Deposit Account Name: InterDigital Communications Corporation

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION** (All the fees below are due upon filing or may be subject to a surcharge.)**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES**

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
-	=	x	= 0

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
-	=	x	= 0

HP = highest number of independent claims paid for, if greater than 3.

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
-	-	/ 50 =	(round up to a whole number) x	= 0

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Information Disclosure Statement

Fees Paid (\$)

\$180.00

**SUBMITTED BY**

Signature	<u>Thomas A. Mattoli</u>	Registration No. (Attorney/Agent) 56,773	Telephone 215-568-6400
Name (Print/Type)	Thomas A. Mattoli		Date June 27, 2007

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the **PATENT APPLICATION** of:

Kim et al.

**Application No.:** 10/071,903

**Confirmation No.:** 3606

**Filed:** February 8, 2002

**For:** SIMPLE BLOCK SPACE TIME  
TRANSMIT DIVERSITY USING  
MULTIPLE SPREADING CODES

**Our File:** I-2-0176.2US

**Date:** June 27, 2007

**Group:** 2616

**Examiner:** Thai D. Hoang

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed Form PTO-1449.

The listed references include references previously cited in this application. Newly cited documents are indicated by an asterisk (\*) on the enclosed Form PTO-1449. Copies of the newly cited documents are enclosed.

This Information Disclosure Statement is being filed with the fee required by 37 C.F.R. § 1.17(p).

**Applicant: Kim et al.**  
**Application No.: 10/071,903**

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the Form PTO-1449 indicating his consideration of the cited materials.

Respectfully submitted,

Kim et al.

By Thomas A. Mattioli  
Thomas A. Mattioli  
Registration No. 56,773  
(215) 568-6400

Volpe and Koenig, P.C.  
United Plaza, Suite 1600  
30 South 17th Street  
Philadelphia, PA 19103

TAM/lis  
Enclosures (7)



FORM PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)				ATTY. DOCKET NO. I-2-0176.2US		SERIAL NO. 10/071,903		
				APPLICANT Kim et al.				
				FILING DATE February 8, 2002		GROUP 2616		
U.S. PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
		5,652,764	07/1997	Kanzaki et al.				
		6,115,406	05/2000	Mesecher et al.				
		6,564,645	05/2003	Nakano et al.				
		6,594,473	07/2003	Dabak et al.				
		6,628,702	09/2003	Rowitch et al.				
		6,721,300	04/2004	Akiba et al.				
		6,775,260	08/2004	Dabak et al.				
		6,788,661	09/2004	Ylitalo et al.				
		7,020,175	03/2006	Frank				
		2002/0090038	07/2002	Dabak et al.				
		2002/0181430	12/2002	Thomas et al.				
FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
		1182990	05/1998	CN			YES	NO
	*	0957604	11/1999	EP				
	*	0993129	04/2000	EP				
	*	0996234	04/2000	EP				
	*	0105060	01/2001	WO				
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)								
		Dabak, A.; Hosur, S.; Negi, R.; Space Time Block Coded Transmit Antenna Diversity Scheme For WCDMA, Wireless Communications and Networking Conference, 1999. WCNC. 1999, IEEE (September 1999), Vol. 3, pp. 1466-1469						
		Li Gang; Zhao Ming; Yao Yan; the Implement of Optimum Demodulator for STTD in WCDMA, Communication Technology Proceedings, 2000. WCC-ICCT 2000. International Conference on, (August 2000), Vol. 2, pp. 1534-1537						

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



FORM PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)				ATTY. DOCKET NO. I-2-0176.2US		SERIAL NO. 10/071,903	
				APPLICANT Kim et al.			
				FILING DATE February 8, 2002		GROUP 2616	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		2003/0021352	01/2003	Benning			
		2003/0067993	04/2003	Viswanathan			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	*	0024133	04/2000	WO			
	*	0064073	10/2000	WO			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
		Kocian, A.; Fleury, B.H.; Iterative Joint Symbol Detection and Channel Estimation for DS/CDMA Via the SAGE Algorithm, Personal, Indoor and Mobile Ratio Communications, 2000. PIMRC 2000. The 11th IEEE International Symposium on, IEEE (September 2000), Vol. 2, pp. 1410-1414					
		ETSI TS 125 224 V 3.4.0 (2000-09), Universal Mobile Telecommunications System (UMTS); Physical Layer Procedures (TDD) (3GPP TS 25.224 version 3.4.0 Release 1999)					
		ETSI TS 125 224 V4.2.0 (2001-09), Universal Mobile Telecommunications System (UMTS); Physical Layer Procedures (TDD) (3GPP TS 25.224 version 4.2.0 Release 4)					

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.